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# INSECT CONTROL 1935-1937 ON CORTE MADERA AREA AND LAGUNA AREA, CLEVELAND NATIONAL FOREST

REPORT BY:
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APRIL 3, 1937

FILE COPY FOREST INSECT LABORATORY, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA.

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# INSECT CONTROL

## Activities of Pine Valley C.C.C. Camp

## Dec. 3, 1934 to March 28, 1935 incl.

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The Pine Valley C.C.C. Camp carried on insect control activities at Mount Laguna and in the Corte Madera country during the winter and early spring of 1935. Inclement weather halted operations at times, but generally speaking the winter was comparatively open.

The organization for this work consisted of an insect control foreman who mapped the areas, spotted the trees, checked the quality of treating work, and kept a complete record of all spotting and treating activities; and a C.C.C. foreman with crew averaging about twenty-two enrollees that handled the treating of the infested trees.

For clearness and convenience of examining the work performed, the report is separated into a record for Mount Laguna and another for Corte Madera.

## Corte Madera

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Date of Operations -- Feb. 11, 1935 to March 21, 1935 incl.

Acreage of Land Treated -- 1,500 acres, approximately.

Ownership of Land Treated -- Of the land treated approximately one half was government, and the other half was land belonging to the Corte Madera Ranch Company. However, only 5 infested trees were found on the private land, while the remaining 50 were on government land, mostly high on Corte Madera Mountain.

Number and Species of Trees Infested -- A total of 55 trees were treated. These were all Coulter pines except

for four Jeffreys in the vicinity of the meadows.

Bark Beetles Responsible -- Engraver Beetles (Ips) were responsible for the greatest loss, being the primary invaders of 37 trees. Flat-Headed Borers (Melanophilia) were accountable for the death of 14 trees. Ips and Flat-Headed Borers together were responsible for the death of an additional 4 trees.
The Western Pine Beetle was found in but two trees on the area worked, and then in company with other beetles, these latter being responsible for the killing of the trees.

Details of Operations -- Spotting was by the topographic method and done by the insect control foreman. An enrollee was used for 5 man days to aid in securing data for maps.
The bark-burning method was used exclusively for the treatment of infested trees on this area. 247 enrollee man days were devoted to handling 55 trees, or an average of 4.5 man days per tree. The scattered location of the infested trees and their position on mixed brush and timber covered slopes of very rugged nature made it necessary to use extreme care in burning. This slowed up the treating work to a marked degree.

## Mount Laguna

Date of Operations -- December 3, 1934 to March 28, 1935 incl.

Acreage of Land Treated -- 1,370 acres, approximately.

Ownership of Land Treated -- All of the land treated, with the exception of forty acres belonging to Salisburys, was of government ownership and lay within the Laguna Recreation Area. Of the 511 infested trees, 6 were on private land, the remaining 505 on government property.

Number and Species of Trees Infested -- A total of 511 trees were treated. All of the trees infested were Jeffrey pines with the exception that six were Coulter Pines. These 6 trees were in the upper Piedra Ravine drainage near the desert rim.

Bark Beetles Responsible -- Engraver Beetles (Ips) were responsible for by far the greatest loss, 307 trees being accountable to them. Flat-Headed Borers (Melanophila) killed 122 trees. Ips and Flat-Headed Borers together were responsible for the death of an

additional 81 trees. Western Pine Beetles could be charged with the killing of but one tree, though evidence of their presence in a secondary nature was noted in three or four others. The pine whose death was due to Dendroctonus was a Coulter in the upper Piedra Ravine drainage.

Details of Operations -- Spotting was by the topographic method and done with special care. Only three enrollee man days are chargeable to the spotting, these being used to help in surveying.

The bark-burning method was used exclusively for the treatment of infested trees in this area. Enrollee man days to the number of 914 were devoted to treating 511 trees, or an average of 1.8 man days per tree. Considerable care was taken in burning to prevent the scorching of neighboring oaks and pines, as such damage would materially detract from the condition of the recreation area.

M. H. Carothers

M. H. Carothers,
Insect Control Foreman.
April 3, 1935.

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# INSECT CONTROL

## Activities in the Corte Madera Area

## Spring of 1937.

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Date of Operations -- Feb. 8, 1937 to March 31, 1937 incl.

Acreage of Land Treated -- 1,500 acres, approximately.

Ownership of Land Treated -- Of the land treated approximately one half was government, and the other half was land belonging to the Corte Madera Ranch Company. However, only 2 infested trees were found on the private land, while the remaining 19 were on government land, mostly high on Corte Madera Mountain.

Number and Species of Trees Infested -- A total of 21 trees were treated. These were all Coulter pines except for 3 Jeffreys in the vicinity of the meadows.

Bark Beetles Responsible -- The Western Pine Beetles (D.b.) were responsible for the greatest loss, being the primary invaders of 12 trees. Flat-Headed Borers (Melanophila) were accountable for the death of 5 trees. Ips were responsible for the death of an additional 4 trees.
It is worthy of note that while the Western Pine Beetles were scarce and not responsible for killing any of the pines during the winter of 1934 - 1935, this season they had become the major invaders and were accountable for the death of over half of the trees treated.

Details of Operations -- Spotting was by the topographic method and done by the insect control foreman at spare moments during the directing of treating operations. A six man C.C.C. crew from Pine Valley Camp was used throughout the work and found to be much more efficient than a large crew.

(continued)

The bark-burning method was used exclusively for the treatment of infested trees on this area. 76 enrollee man days were devoted to handling 21 trees, or an average of 3.6 man days per tree. The scattered location of the infested trees and their position on mixed brush and timber covered slopes of very rugged nature made it necessary to use extreme care in burning.

Remarks -- Reference is made to the insect control reconnaisance report on this area dated February 3, 1937. The dying pines in Long Valley reported by the foreman of the ranch as probably due to beetles was found to be erroneous. We were thus fortunate in finding fewer infested trees than had been anticipated.
The control work was completed by March the fourth except for the burning of eight trees which had to be postponed until two later dates when it was damp enough to burn with safety.

M. H. Carothers

M. H. Carothers,
Insect Control Foreman.
May 3, 1937.

EXPENDITURES OF CORTE MADERA

INSECT CONTROL PROJECT

- - - - - - - : - - - - - - -

Expenditure from Project Funds

| | |
|---|---|
| Labor - - - - - - - - - - - - - - | $123.18 |
| Supervision - - - - - - - - - - - | 108.89 |
| Transportation - - - - - - - - - | 22.76 |
| Total - - - - - | $254.83 |

Expenditure Contributed Time and Expenses

| | |
|---|---|
| Supervision - - - - - - - - - - - - | $4.93 |

Total Cost of Project

| | |
|---|---|
| Project Funds - - - - - - - - - - | $254.83 |
| Contributed Time - - - - - - - - | 4.93 |
| Total - - - - - | $259.76 |

Total Cost per Tree

| | |
|---|---|
| Total Cost of Project - - - | $259.76 |
| Number of Trees Treated | 21 |

Cost per Tree - - - $12.37

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# INSECT CONTROL

## Activities in the Laguna Area

## Spring of 1937

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Date of Operations -- Feb. 25, 1937 to April 30, 1937 incl.

Acreage of Land Treated -- 1,350 acres, approximately.

Ownership of Land Treated -- The government land treated amounted to 1,150 acres. 200 acres of private land was also included in the operations, 40 acres of this belonging to the Cheroskie Estate and the remaining 160 acres to the Campbell Estate. The number of trees felled on each of the various lands was as follows: government land - 89 trees, Cheroskie Estate - 3, Campbell Estate - 41.

Number and Species of Trees Infested -- A total of 133 trees were treated. 106 of these were Jeffrey pines and 27 were Coulter pines. All of the 27 Coulter pines were in the area between the Shrine Tract and Filaree Flats.

Bark Beetles Responsible -- Engraver Beetles (Ips confusus) were responsible for the greatest loss, 67 trees being accountable to them. The work of the Ips was confined almost exclusively to the area between the Shrine Tract and Filaree Flats, there being only five Ips killed trees treated outside of this vicinity. The five were found along the Laguna-Laguna Junction road about one third of a mile above the middle cattle guard.

Western Pine Beetles (Dendroctonus brevicomis) killed 10 trees and in conjunction with Ips were responsible for an additional 10 trees. These trees were all between the Shrine Tract and Filaree Flats.

Flat-Headed Borers (Melanophila) were the cause of the death of 46 of the trees treated. Aside from the Shrine-Filaree Flats area, Melanophila were the principal invaders of the pines. Their attack was thinly

scattered throughout the pine belt of the Laguna Recreation Area; and while a large part of their infestation was treated, the inability to secure sufficient men for the work at the appropriate time prevented this project from handling many of the trees containing Flat-Headed Borers.

Geographical Division of the Operations --

Area 1/3 mile northeast of middle cattle guard.
Ips - 5 trees, Melanophila - 21 trees: a total of 26 trees treated.

Area along Laguna-Laguna Junction Road between Cuyamaca View and County Road Maintenance Station.
Melanophila - 4 trees.

Area vicinity of Laguna Guard Station.
Melanophila - 5 trees.

Area vicinity beginning of Monument Peak Trail.
Melanophila - 1 tree.

Area vicinity of Vallecitos Tract.
Melanophila - 1 tree.

Area vicinity Laguna Camp Ground.
Melanophila - 2 trees.

Area Shrine Tract to Filaree Flats.
Ips - 62 trees, D.b. - 10 trees, D.b. & Ips - 10 trees, Melanophila - 12 trees: a total of 94 trees treated.

Details of Operations -- Spotting was by the topographic method and done by the insect control foreman at spare moments during the directing of treating operations. One or two crews of three to six men each were used for the work, the men being secured from the Laguna Spike E.R.A. Camp.

The bark-burning method was used exclusively for the treatment of infested trees on this area. 189 six-hour man days were devoted to handling 133 trees, or an average of 1.4 man days per tree. Considerable care was taken in burning to prevent the scorching of neighboring oaks and pines, as such damage would materially detract from the condition of the recreation area.

M. H. Carothers

M. H. Carothers,
Insect Control Foreman.
May 4, 1937.

EXPENDITURES OF LAGUNA

INSECT CONTROL PROJECT

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Expenditure from Project Funds

| | |
|---|---|
| Labor - - - - - - - - - - - - - - | $567.00 |
| Supervision - - - - - - - - - - - | 131.25 |
| Transportation - - - - - - - - - | 27.76 |
| Total - - - - - - | $726.01 |

Expenditure Contributed Time and Expenses

| | |
|---|---|
| Supervision - - - - - - - - - - - | $4.53 |
| Transportation - - - - - - - - - | 3.00 |
| Total - - - - - - | $7.53 |

Total Cost of Project

| | |
|---|---|
| Project Funds - - - - - - - - - - | $726.01 |
| Contributed Time & Trans. - - - | 7.53 |
| Total - - - - - - | $733.54 |

Total Cost per Tree

| | |
|---|---|
| Total Cost of Project - - - | $733.54 |
| Number of Trees Treated | 133 |
| Cost per Tree | $5.515 |